

Work Order ID 61302

Monday, August 16, 2010 8:17:32 AM



Ship today per
as per
Saved email

Page 1

Item ID: D3126-1

Accept



Setup Start



Revision ID:

Item Name: Bracket

Stop



Start Date: 8/16/2010 Start Qty: 2.00



Cust Item ID:

Required Date: 8/16/2010 Req'd Qty: 2.00



Customer:

Reference:

Approvals:

Process Plan: MF

Date: 10-8-16

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D3126	Rev A1

100

0.00



FLOW WATER JET

Waterjet

Memo

0.00

FLOW CNC Waterjet

1-Cut as per Dwg D3126 ☐ Dwg Rev: A1 ☐ Prog Rev: A1 ☐ 2-
Deburr if necessary

may not pull

10-8-16

8

110

0.00



QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.00

Quality Control

see attached
10-8-16 e-mail

120

0.00



QC8- Inspect parts - second check

QC

Memo

0.00

Quality Control

8/20/16

8

W/O: 61302		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
W/O 61302	# 100	Parts were made out of 0.050 per David Shepherd's Email / see Attached email.					

Part No: D3126-1 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 61302

Monday, August 16, 2010 8:17:32 AM

Page 2

Item ID: D3126-1

Accept

Revision ID:

Item Name: Bracket

Start Date: 8/16/2010 Start Qty: 2.00

Required Date: 8/16/2010 Req'd Qty: 2.00

Reference:

Cust Item ID:

Customer:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start

Stop

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130



Brake NC

NC BRAKE

0.00

Memo

0.00

Brake NC

Deburr if necessary ☐ Form on CNC brake as per D3126 using Jig
D3126T1 Identify as D3126-1 ☐ Scribe Dart P/N as shown on Dwg D3126

10-08-16 (2)

PTO

140



QC

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

Quality Control

5/16/08/16

(15)

150



Packaging

Identify as per dwg & Stock Location: _____

0.00

Memo

0.00

Packaging

send to for NYPP/Edwards

Dart Aerospace Ltd

W/O: 61302		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
10-08-16	130	6 scrapped - not needed	[Signature]	10-08-16	6	[Signature]	S 10/08/16

Part No: D3126-1 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 61302

Monday, August 16, 2010 8:17:32 AM



Page 3

Item ID: D3126-1

Accept



Setup Start



Revision ID:

Stop



Item Name: Bracket

Start Date: 8/16/2010 Start Qty: 2.00



Cust Item ID:

Required Date: 8/16/2010 Req'd Qty: 2.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/08/16 JJ

MF
10-8-16

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Monday, August 16, 2010 8:17:32 AM

Page 1

Work Order ID: 61302



Parent Item: D3126-1



Parent Item Name: Bracket

Start Date: 8/16/2010

Required Date: 8/16/2010

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP A ☐ 03.01.15 ☐ New issue ☐ KJ/RF
IPP Rev: B Now On Waterjet 07-04-19 JLM ☐

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

M304S22GA / m304518GA Purchased

No

100

sf

30.2896

0.0593

0.124842

.5



304/316.032 Sheet



810-8-16

0.050"
as per
David Shepherd
e-mail.

Location

Loc Qty

Loc Code

MAT20

30.2896

109023

30.2896

108156

0.050

108156

⑧
→
PTO

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

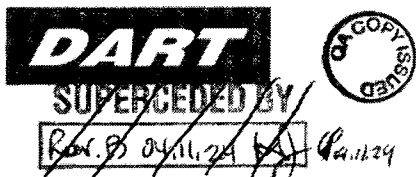
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

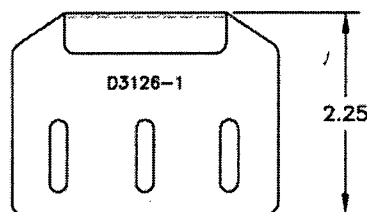
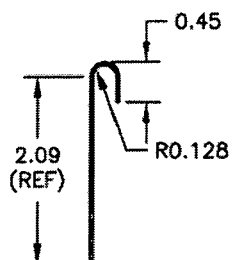
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



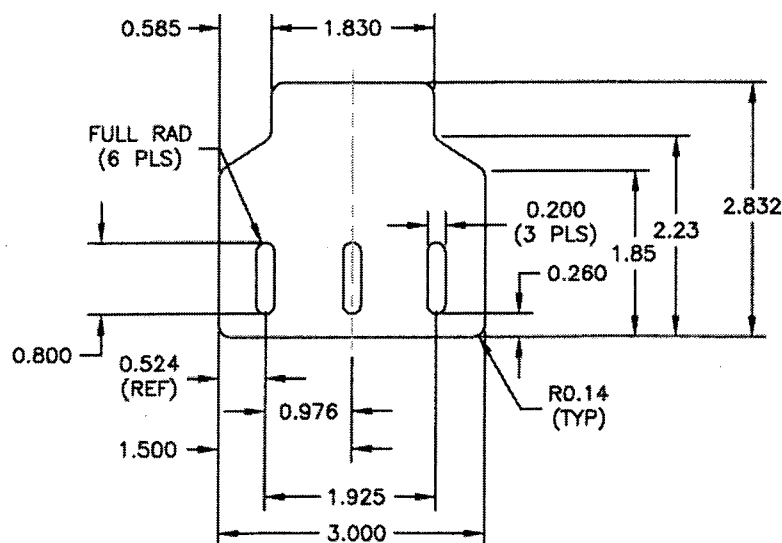
DESIGN #	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D3126	REV. A SHEET 1 OF 3
DATE 02.04.17	TITLE BRACKET		SCALE 1:2
A	02.04.17	NEW ISSUE	
AI	02.09.23	ADD "ANNEALED" SPEC	

RELEASED
02.05.27



D3126-1 BRACKET
REPLACES PREMIER P/N B30-23000-265

61308



D3126-1 BRACKET FLAT PATTERN

NOTES

- 1) MATERIAL: AISI 304/316 SS SHEET 0.032 THICK PER MIL-S-5059 (REF. DART SPEC. M304S) ANNEALED
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 5) SCRIBE DART P/N D3126-1 AS SHOWN

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

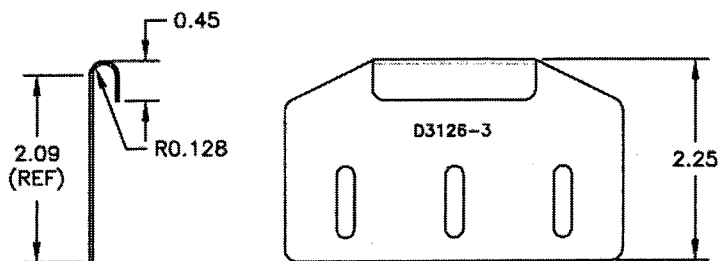
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

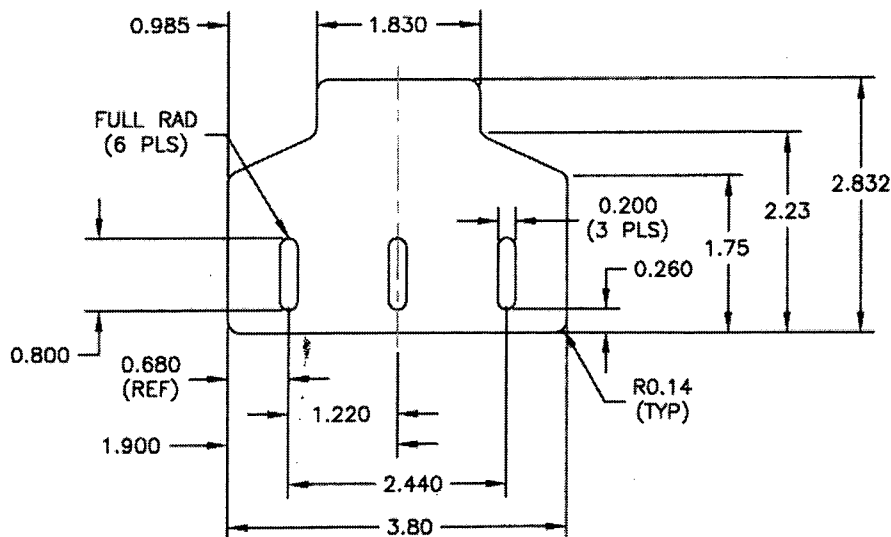


DESIGN #	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D3126	REV. A SHEET 2 OF 3
DATE 02.04.17		TITLE BRACKET	SCALE 1:2

RELEASED
02.05.27 #



D3126-3 BRACKET
REPLACES PREMIER P/N B30-23000-267



D3126-3 BRACKET FLAT PATTERN

NOTES

- 1) MATERIAL: AISI 304/316 SS SHEET 0.032 THICK PER MIL-S-5059 (REF. DART SPEC. M304S) ANNEALED
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 5) SCRIBE DART P/N D3126-3 AS SHOWN

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

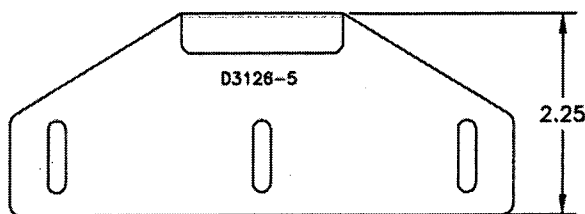
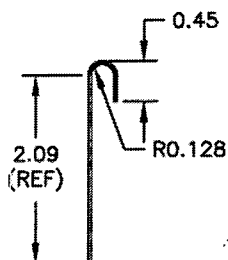
NOTE: Date & initial all entries



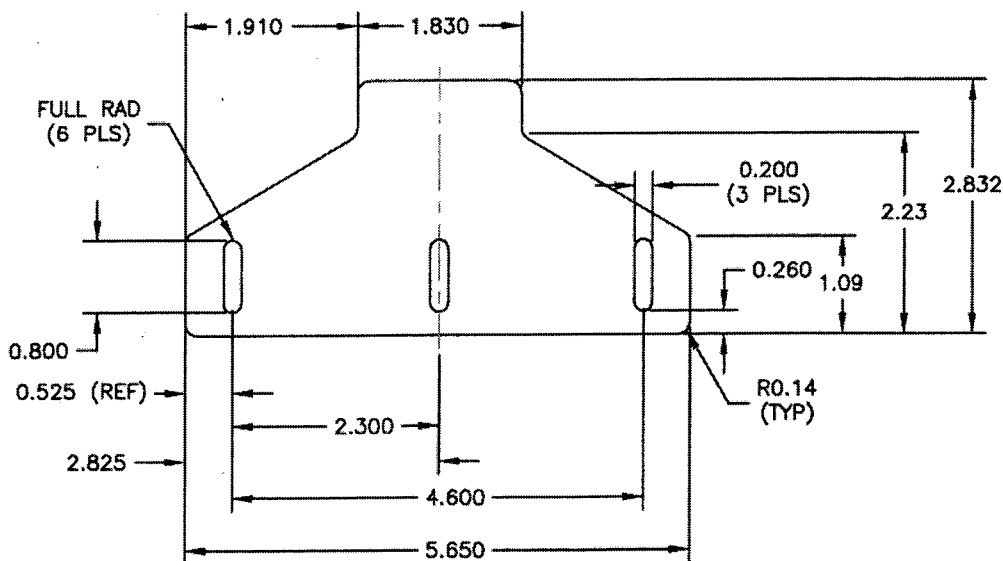
DESIGN #	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D3126	REV. A SHEET 3 OF 3
DATE 02.04.17		TITLE BRACKET	SCALE 1:2

RELEASED
02.05.27 #

#61302



D3126-5 BRACKET
REPLACES PREMIER P/N B30-23000-269



D3126-5 BRACKET FLAT PATTERN

NOTES

- 1) MATERIAL: AISI 304/316 SS SHEET 0.032 THICK PER MIL-S-5059 (REF. DART SPEC. M304S) ANNEALED
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 5) SCRIBE DART P/N D3126-5 AS SHOWN

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Melanie Fauteux

From: David Shepherd [dshepherd@dartaero.com]
Sent: Friday, August 13, 2010 5:45 PM
To: 'Melanie'
Cc: 'Dan Stow'; 'Bill Beckett'; 'Spyke Whiting'; 'Peggy McDonald'; 'L Lacelle'; 'Sian Willems'
Subject: RE: NYPD Spacedoors

Melanie,

Further to my discussion with Dan, please make 2 x D3126-1 from 0.050" instead of 0.032" stainless per dwg for NYPD to try. Accept this email as my permission to deviate from the dwg and attach to work order. We need to ship Monday afternoon if possible. Dan Stow should inspect parts before shipment.

Sian,

Need a No Charge Order for 2 x D3126-1 for NYPD/Edwards. You'll have to get contact info from Dan Stow.

David

From: Dan Stow [mailto:dstow@dartaero.com]
Sent: Friday, August 13, 2010 1:48 PM
To: 'David Shepherd'; Bill Beckett; 'Spyke Whiting'
Cc: 'Melanie'
Subject: RE: NYPD Spacedoors
Importance: High

David,

I just got off the phone with Paul.

Paul has told me that the NYPD has already ordered replacement brackets and that they actually might have a few other spares because apparently this has been an ongoing issue with them. I explained your suggestion about increasing the thickness of the brackets and that we could probably have them sent to him Monday to arrive on Tuesday. He was very happy with this and said that he would have technicians there most of the week so it should work out well.

I am not sure how to proceed with the having these manufactured so please let Melanie know.

Thanks,

Dan Stow
Technical Support
Dart Aerospace Ltd.
dstow@dartaero.com
p:613.632.5200
c:613.676.0992

From: Dan Stow [mailto:dstow@dartaero.com]
Sent: August 13, 2010 11:02 AM
To: 'David Shepherd'; Bill Beckett; 'Spyke Whiting'
Subject: RE: NYPD Spacedoors

Paul is on a plane right now so I left him a voicemail stating that we could send him replacement brackets today but that they would be the original brackets or we could discuss increasing the strength of the brackets and have them shipped from DAS Monday. I asked him to call me back.

Dan Stow
Technical Support
Dart Aerospace Ltd.
dstow@dartaero.com
p:613.632.5200
c:613.676.0992

From: David Shepherd [mailto:dshepherd@dartaero.com]
Sent: August 12, 2010 7:54 PM
To: 'Dan Stow'
Cc: spyke@eaglecopters.com; 'Bill Beckett'
Subject: RE: NYPD Spacedoors

Dan,

Like I said, I provided a possible solution to Peggy a couple of weeks ago, but never heard anything after that.

Just spent some time looking at the drawing and my understanding is that it is the D3126-1 bracket and possibly the D3126-5 bracket that is just behind that on the leading edge of the door that has failed. These brackets are made from 0.032" stainless. We could cut the same flat pattern from 0.050" stainless as a deviation and ship to NYPD on Monday at the latest to meet up with Paul's technician. Going from 0.032" to 0.050" quadruples the strength of these parts with respect to bending resistance. While I think the ideal solution would be to replace the front two parts with one long bracket, this is a difficult part to manufacture in short order because of the compound curve. My proposal above could get them up and flying in relatively short order.

Might want to call the customer direct to confirm ... Maybe Spyke can get you a contact and a phone number at NYPD ... I'm not sure why anyone from Edwards has to go up there at all since I believe the NYPD can change the parts out fairly quickly themselves.

David

From: Dan Stow [mailto:dstow@dartaero.com]
Sent: Thursday, August 12, 2010 5:21 PM
To: Bill Beckett
Cc: dshepherd@dartaero.com; spyke@eaglecopters.com
Subject: Re: NYPD Spacedoors

Hi Bill,

Any comments on how you would like to respond?

Dan

Sent from my iPhone

On 2010-08-12, at 6:32 PM, "Schreuder, Paul" <pschreuder@bellhelicopter.textron.com> wrote:

I'm on the road right now and don't have access. I guess this means that you don't have a fix at this time. I need to determine if I need to cancel one of our technicians that is planning to travel to NYC next week o work on the 412.

Thanks,

Paul

From: Dan Stow <dstow@dartaero.com>
To: Schreuder, Paul
Cc: 'David Shepherd' <dshepherd@dartaero.com>; 'Spyke Whiting' <spyke@eaglecopters.com>
Sent: Thu Aug 12 12:37:31 2010
Subject: RE: NYPD Spacedoors

Hi Paul,

Could you please forward the pictures to us?

Thanks,

Dan Stow

Technical Support

Dart Aerospace Ltd.

dstow@dartaero.com

p:613.632.5200

c:613.676.0992

From: Schreuder, Paul [<mailto:pschreuder@bellhelicopter.textron.com>]
Sent: August 12, 2010 11:43 AM
To: dstow@dartaero.com; dshepherd@dartaero.com
Subject: NYPD Spacedoors

Hi Dan, David.

Spyke gave me your emails, I think Peggy might have mentioned that we are having an issue with the NYPD Spacedoor lower rail retaining brackets. You may have seen the pictures of the brackets cracking. I was wondering what you have in work to solve the issue and how soon we may see some new brackets?

We are planning a trip to NY next week and we could install replacements if they are available.

Thanks for the help.

Paul Schreuder
423-366-3361 Cell

No virus found in this incoming message.

Checked by AVG - www.avg.com

Version: 8.5.441 / Virus Database: 271.1.1/3066 - Release Date: 08/12/10 06:34:00

No virus found in this incoming message.

Checked by AVG - www.avg.com

Version: 8.5.441 / Virus Database: 271.1.1/3068 - Release Date: 08/13/10 06:34:00